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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,025	06/20/2003	Jeffery A. Engelman	BLD920030006US1	7144
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DUFT BORNSSEN & FISHMAN, LLP 1526 SPRUCE STREET SUITE 302 BOULDER, CO 80302			EXAMINER SINGH, SATWANT K	
			ART UNIT 2625	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/601,025	Applicant(s) ENGELMAN ET AL.	
	Examiner SATWANT K. SINGH	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8,9,11,13-15,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,9,11,13-15,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 14 October 2008.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

3. Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. V The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 6, 8, 9, 11, 13-15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (IUS 7,079,264) in view of Robinson et al. (US 7,202,977) and Fukazawa (US 7,079,277).
3. Regarding Claim 1, Nguyen et al teaches printing a Unicode data stream , the data stream including a section of Unicode complex text data (graphics device interface which is compatible to read the Unicode data, Abstract), comprising: a text parser (Fig. 3, interface sub-module 142) adapted to parse the Unicode data stream to determine the section of Unicode complex text data in the Unicode data stream (the interface sub-module creates the necessary data structures for the device sub-module by parsing the

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information given by the GPD parser) (col. 8, lines 55-62); a layout engine coupled to the text parser (Fig. 3, device font sub-module, 144), the layout engine adapted to receive the section of Unicode complex text data from the text parser, and adapted to determine at least one of a plurality of glyphs of at least one font corresponding to the section of Unicode complex text data (the device font sub-module handles the printer device font resource , glyph translation, the data transition between GDI and Driver, and the actual printing) (col. 9, lines 5-8); and a rasterizer (Fig. 2, raster module 122) coupled to the layout engine and the text parser. ***All of the above is performed by the universal printer driver which is located within the personal computer 20 (col. 6, lines 41-55).***

Nguyen et al fails to teach a rasterizer adapted to perform processing on the section of Unicode complex data based on the language encoded by the data to position at least one of the plurality of glyphs on a portion of a page.

Robinson et al teaches a rasterizer adapted to perform processing on the section of Unicode complex data based on the language encoded by the data to position at least one of the plurality of glyphs on a portion of a page (raster image processor may determine the location of the print integrity identifier within the PDL) (col. 5, lines 33-46).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nguyen with the teaching of Robinson to allow the rasterizer to determine the location of the glyphs on the printed page by encoding the location within the PDL data stream.

Nguyen et al and Robinson et al fail to teach printing wherein the text parser, layout engine and the rasterizer are located within a printer (the printer driver is not located within the printer).

Fukazawa teaches a printing wherein the text parser, layout engine and the rasterizer are located within a printer (Fig. 30, printer driver 30).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nguyen and Robinson with the teaching of Fukazawa to install the print driver within the printer to make the print processing more efficient and less time consuming.

4. Regarding Claim 3, Nguyen et al teaches wherein the at least one font includes an encoding table and a glyph table, the encoding table including a plurality of codes and a plurality of glyph indices corresponding to the plurality of codes, the glyph table including the plurality of glyphs corresponding to the plurality of glyph indices (glyph translation table¹⁷⁸) (col. 9, lines 10-37).

5. Regarding Claim 5, Nguyen et al teaches wherein the layout engine determines the at least one glyph by determining at least one index of the plurality of glyph indices for the section of Unicode complex text data and at least one position for the at least one glyph (driver looks in the GTT's map table to retrieve the individual glyph's character code to allow proper selection of the printer resident font character to be printed by the printer) (col. 9, lines 10-37).

6. Regarding Claim 6, Nguyen et al teaches wherein the text parser provides a remaining portion of the Unicode data stream not including the section of Unicode

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complex text data to the rasterizer to perform one-to-one rendering of a remaining portion of the Unicode data stream (text to be printed is cached and then sent along with the graphics, this involves interaction with the raster module) (col. 8, lines 19-33).

7. Regarding Claim 8, Nguyen et teaches wherein the text parser determines tile section of Unicode complex text data based upon at least one code word for the section of Unicode complex text data (translation of multi-byte code) (col. 9, lines 13-37).

8. Regarding Claim 9, Nguyen teaches the text parser determines the section of Unicode complex text data based upon at least one marker for the section of Unicode complex text data (translation of multi-byte code) (col. 9, lines 13-37).

9. Regarding Claim 11, Nguyen et al teaches a method for printing a Unicode data stream, the Unicode data stream of including a section of Unicode complex text data (graphics device interface which is compatible to read the Unicode data, Abstract), the method comprising the steps of: (a) parsing the Unicode data stream to determine the section of Unicode complex text data in the data stream (the interface sub-module creates the necessary data structures for the device sub-module by parsing the information given by the GPD parser) (col. 8, lines 55-62); (b) utilizing a layout engine to receive the section of Unicode complex text data from the text parser and to determine at least one of the plurality of glyphs corresponding to the section of Unicode complex text data (the device font sub-module handles the printer device font resource , glyph translation, the data transition between GDI and Driver, and the actual printing) (col. 9, lines 5-8). ***All of the above is performed by the universal printer driver which is located within the personal computer 20 (col. 6, lines 41-55).***

Nguyen et al fails to teach performing processing of the section of Unicode complex text data based on the language encoded by the data to position the at least one of the plurality of glyphs on a portion of a page.

Robinson et al teaches performing processing of the section of Unicode complex text data based on the language encoded by the data to position the at least one of the plurality of glyphs on a portion of a page (raster image processor may determine the location of the print integrity identifier within the PDL) (col. 5, lines 33-46).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nguyen with the teaching of Robinson to allow the rasterizer to determine the location of the glyphs on the printed page by encoding the location within the PDL data stream.

Nguyen et al and Robinson fail to teach wherein the above is performed within the printer (the printer driver is not located within the printer).

Fukazawa teaches a printing wherein the above is performed within the printer (Fig. 30, printer driver 30).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nguyen and Robinson with the teaching of Fukazawa to install the print driver within the printer to make the print processing more efficient and less time consuming.

10. Regarding Claim 13, Nguyen et al teaches a method further comprising the step of: (d) utilizing an encoding table including a plurality of codes and a plurality of glyph indices corresponding to the plurality of codes, the glyph table including the plurality of

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glyphs corresponding to the plurality of glyph indices (glyph translation table178) (col. 9, lines 10-37).

11. Regarding Claim 14, Nguyen et al teaches a method wherein the layout engine determines the at least one glyph by determining at least one index of the plurality of glyph indices for the section of Unicode complex text data and at least one position for the at least one glyph (driver looks in the GTT's map table to retrieve the individual glyph's character code to allow proper selection of the printer resident font character to be printed by the printer) (col. 9, lines 10-37).

12. Regarding Claim 15, Nguyen et al teaches a method further comprising the step of: (d) utilizing a rasterizer to perform one-to-one rendering of a remaining portion of the Unicode data stream not including the section of Unicode complex text data (text to be printed is cached and then sent along with the graphics, this involves interaction with the raster module) (col. 8, lines 19-33).

13. Regarding Claim 17, Nguyen et al teaches a method wherein the data parsing step (a) further includes the step of: (a1) determining the section of Unicode complex text data based upon at least one code word for the section of Unicode complex text data (translation of multi-byte code) (col. 9, lines 13-37).

14. Regarding Claim 18, Nguyen et al teaches a method wherein the data parsing step (a) further includes the step of: (a1) determining the section of Unicode complex text data based upon at least one marker for the section of Unicode complex text data (translation of multi-byte code) (col. 9, lines 13-37).

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15. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al, Robinson et al, and Fukazawa as applied to claim 1 above, and further in view of McConnell et al. (US 5,526,477).

16. Regarding Claim 4, Nguyen et al, Robinson et al, and Fukazawa fail to teach a printer wherein at least one glyph can include a null glyph.

McConnell et al teach a printer wherein at least one glyph can include a null glyph (defaults representing null characters) (col. 22, lines 8-16).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Nguyen, Robinson, and Fukazawa with the teaching of McConnell to use a null glyph for the purpose of combining characters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATWANT K. SINGH whose telephone number is (571)272-7468. The examiner can normally be reached on Monday thru Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward L. Coles/
Supervisory Patent Examiner, Art Unit 2625

/Satwant K. Singh/
Examiner, Art Unit 2625

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